

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,700	12/29/2003	David M. Gravett	110129.431	2125
41551 7590 09/28/2007 SEED INTELLECTUAL PROPERTY LAW GROUP PLLC 701 FIFTH AVENUE, SUITE 5400			EXAMINER	
			FISHER, ABIGAIL L	
SEATTLE, WA 98104-7092			ART UNIT	PAPER NUMBER
			1609 .	•
			C VVIII DATE	DEL 11/EDV 140DE
			MAIL DATE	DELIVERY MODE
			09/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)					
	10/748,700	GRAVETT, DAVID M.					
Office Action Summary	Examiner	Art Unit					
	Abigail Fisher	1609					
The MAILING DATE of this communication a							
Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory perioder failure to reply within the set or extended period for reply will, by state Any reply received by the Office later than three months after the main earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUN 1.136(a). In no event, however, may a not will apply and will expire SIX (6) MO ute, cause the application to become A	ICATION. I reply be timely filed INTHS from the mailing date of this communication. ABANDONED (35 U.S.C. § 133).					
Status							
1) Responsive to communication(s) filed on 29	December 2003.						
· <u> </u>	,						
	, , , , , , , , , , , , , , , , , , , ,						
closed in accordance with the practice under	r Ex parte Quayle, 1935 C.I	D. 11, 453 O.G. 213.					
Disposition of Claims							
4)⊠ Claim(s) <u>1-98</u> is/are pending in the application	☑ Claim(s) <u>1-98</u> is/are pending in the application.						
4a) Of the above claim(s) 75 is/are withdraw	4a) Of the above claim(s) <u>75</u> is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.							
6) Claim(s) is/are rejected.							
7) Claim(s) is/are objected to.							
8)⊠ Claim(s) <u>1-74 and 76-98</u> are subject to restri	ction and/or election require	ement.					
Application Papers							
9)☐ The specification is objected to by the Exami	ner.						
10) The drawing(s) filed on is/are: a) a		by the Examiner.					
Applicant may not request that any objection to the							
Replacement drawing sheet(s) including the corre	ection is required if the drawing	g(s) is objected to. See 37 CFR 1.121(d).					
11) The oath or declaration is objected to by the	Examiner. Note the attache	d Office Action or form PTO-152.					
Priority under 35 U.S.C. § 119							
12) ☐ Acknowledgment is made of a claim for foreig	gn priority under 35 U.S.C.	§ 119(a)-(d) or (f).					
1. Certified copies of the priority docume	nts have been received.						
2. Certified copies of the priority docume	2. Certified copies of the priority documents have been received in Application No						
Copies of the certified copies of the pr	iority documents have beer	n received in this National Stage					
application from the International Bure							
* See the attached detailed Office action for a list	st of the certified copies no	t received.					
Attachment(s)							
Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948)		Summary (PTO-413) (s)/Mail Date					
Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date		Informal Patent Application					

DETAILED ACTION

Claims 1-98 are pending.

Claim 75 was not put into an election/restriction group and not considered because its dependency is not clear. Claim 75 appears to be a method of producing/forming however it depends from a claim that is a method of treating a disease.

Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- Claims 1, 3, 7-32, 34-64, and 66-67, drawn to a composition comprising a diblock copolymer, amino acid, and hydrophobic drug, classified in class 424, subclass 482.
- II. Claims 2, 3, 33, and 68, drawn to a composition comprising a diblock copolymer, an oligopeptide, and a hydrophobic drug, classified in class 424, subclass 482.
- III. Claims 4, 6 and 70, drawn to a composition comprising a block copolymer, amino acid, and a hydrophobic drug, classified in class 424, subclass 482.
- IV. Claims 5, 6 and 71, drawn to a block copolymer, an oligopeptide, and a hydrophobic drug, classified in class 484, subclass 482.
- V. Claim 69, drawn to a diblock copolymer, two different amino acids, and a hydrophobic drug, classified in class 424, subclass 482.

- VI. Claim 72, drawn to a block copolymer, two different amino acids, and a hydrophobic drug, classified in class 424, subclass 482.
- VII. Claim 65, drawn to method of producing a composition, classified in class 424, subclass 482.
- VII. Claim 73, drawn to a method for forming a drug delivery vehicle, classified in class 424, subclass 482.
- IX. Claims 74 and 76, drawn to a method of forming a composition, classified in class 424, subclass 482.
- X. Claims 77-78 and 81-96, drawn to a method of treating a disease, classified in class 424, subclass 482.
- XI. Claims 79-80, drawn to method of preventing a disease, classified in class 424, subclass 482.
- XII. Claim 97, drawn to a method of enhancing the dissolution of a water-soluble composition comprising adding an amino acid, classified in class 424, subclass 482.
- XIII. Claim 98, drawn to a method of enhancing the dissolution of a water-soluble composition comprising adding an oligopeptide, classified in class 424, subclass 482.

The inventions are distinct, each from the other because of the following reasons:

Inventions I-VI are directed to related products. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the

inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed require different components, amino acids versus oligopeptides (I vs. II and III vs. IV). Inventions VII and VIII require two different amino acids. Invention(s) I (or II) requires a diblock polymer (X-Y) while Invention(s) III(or IV) requires a block copolymer (X-Y-X or Y-X-Y). Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;

Application/Control Number: 10/748,700

Art Unit: 1609

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C.101 and/or 35 U.S.C. 112, first paragraph.

A search of the prior art for Invention(s) I (or III), which includes an amino acid are not likely to include inventions that require either two amino acids or an oligopeptide. A search of the prior art to include all the different types of inventions (Inventions I-VI) would require different search strategies. Additionally a search for a diblock copolymer would not likely result in prior art applicable to block copolymer.

Inventions VII (or VIII or IX, X (or XI) and XII (or XIII) are directed to related processes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed have different design, mode of operation, and function. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

A search for the process of making (Inventions VII-IX) would not likely result in prior art applicable to a method of treating (or preventing) a disease (Inventions X and XI) or Inventions XII-XIII. A search of the different processes would require different search queries. Additionally the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph, for instance enablement.

Inventions VII, VIII and IX are directed to related processes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the

Application/Control Number: 10/748,700

Art Unit: 1609

inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed require different steps in forming the products.

Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given below and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C.101 and/or 35 U.S.C. 112, first paragraph.

Invention VII requires sterilization while Inventions VII and IX do not require sterilization. Therefore prior art applicable to one invention would not likely be applicable to another invention as well as would require different search queries.

Invention IX requires an additional processing solvent therefore a search for prior art pertaining to this invention would require a different search query than VII as well as prior art applicable would not likely be applicable to invention VIII.

Inventions X and XII are directed to related processes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed have different effect. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

The inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph, for instance enablement. These two inventions would also require different search queries.

Inventions XII and XIII are directed to related processes. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed require different products. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given below

and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

The inventions would require different search queries as well as prior art applicable to Inventions I-VIII are not likely to be applicable to Inventions XIV and XV.

The inventions require different products. Invention XII requires an amino acid while XIII requires an oligopeptide. Therefore the inventions require different search queries as well as prior art applicable to one invention is not likely to be applicable to another invention.

Inventions I-VI and VII-IX are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the products (Inventions I-VII) can be made by different processes. Inventions VII-IX are directed to three different process of producing compositions. Therefore in view of Inventions I-VI and VII, the products could be made process VIII or in view of Inventions I-VI and VIII the products could be process IX.

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

A search of the prior art for Inventions I-VI would require different search queries than for Inventions VII-IX. A search for Invention I-VI would not likely result in prior art that includes all three processes.

Inventions I-VI and X-XI are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the products can be used to treat or prevent a disease in a subject other than a mammal, like a reptile, rather than Inventions X or XI.

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Inventions X and XI are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph, for instance enablement issues.

Inventions I-VI and XII-XIII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case other products could be used in a method for enhancing the rate of dissolution of a water-soluble composition. For instance, the water-soluble composition could be converted to a salt thereby increasing its solubility.

(a) the inventions have acquired a separate status in the art in view of their different classification;

- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

The inventions would require different search queries as well as prior art applicable to Inventions I-VI are not likely to be applicable to Inventions XII and XIII.

Applicant is advised that the reply to this requirement to be complete <u>must</u> include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election

Application/Control Number: 10/748,700 Page 15

Art Unit: 1609

shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Elections

If applicant elects Invention I, then they must also elect from the following species election.

Applicant is required to elect a species from each of the following <u>3</u> species election requirements.

First Species Election

This application contains claims directed to the following patentably distinct species: diblock copolymer. Applicant is required to elect a single disclosed diblock copolymer for initial examination. Applicant must specifically elect a single species for block X and a single species for block Y. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, 1, 3, 7-10, 13-14, 17-19, 24-32, 34-64, 66-67 are generic.

Second Species Election

This application contains claims directed to the following patentably distinct species: amino acid. Applicant is required to elect either that the amino acid is a naturally occurring amino acid or a non-naturally occurring amino acid for initial examination. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, 1, 3, 7-32, 35, 37-64, 66-67 are generic.

Application/Control Number: 10/748,700 Page 17

Art Unit: 1609

Third Species Election

This application contains claims directed to the following patentably distinct species: hydrophobic drug. Applicant is required to elect a single disclosed type of hydrophobic drug for initial examination from the following: hemotherapeutic, antibiotic, antimicrobial, antimicrotubule, anti-inflammatory, immunosuppressant or antiproliferative drugs. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, 1, 3, 7-10, 13-14, 17-19, 24-32, 34-45, 47-50, 52-64, 66-67 are generic.

If Applicant elects either Invention XII or XIII then they must also elect a single disclosed species from the following species election.

This application contains claims directed to the following patentably distinct species: disease. Applicant is required to elect a single disclosed type of disease for initial examination from the following: inflammatory conditions, autoimmune,

Application/Control Number: 10/748,700

Art Unit: 1609

neurological disorders, cancer, or benign hyperproliferative diseases. The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, 77-81 and 92-94 are generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. All of the compounds possess different physical and chemical properties as well being structurally divergent. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete <u>must</u> include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a

claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

Application/Control Number: 10/748,700 Page 20

Art Unit: 1609

Rejoinder

The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abigail Fisher whose telephone number is 571-270-3502. The examiner can normally be reached on M-Th 9am-4pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on 571-272-0718 or Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abigail Fisher Examiner Art Unit 1609

Cecilia J. Tsang

Store deory Putent Examiner (Edinology Center 1600

AF